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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,844	07/25/2003	Jinhun Joung	2003P07969 US	2648

7590 09/30/2009

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EXAMINER	
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ART UNIT	PAPER NUMBER
2884	

MAIL DATE	DELIVERY MODE
09/30/2009	PAPER

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/627,844
Filing Date: July 25, 2003
Appellant(s): JOUNG ET AL.

Thomas A. Corrado
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/29/2009 appealing from the Office action mailed 04/29/2009

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4725734	Nishiki	2-1988
2002/0175289 A1	Soluri et al.	11-2002
5099134	Hase et al.	3-1992
5961714	Melscher et al.	10-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 – 7, 10 – 16, 19 -25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over in Soluri et al. (US 2002/0175289) in view of Hase et al. (US Patent 5,099,134) and Nishiki (US Patent 4,725,734).

With regards to claims 1, 10, 19 and 28, Soluri discloses a scintigraphic device (Figures 1 -8), comprising: a collimator device 1 including a grid of collimation square holes (figure 2) formed by a plurality of sheets arranged in a grid pattern [0037]; and pixilated scintillators 20 individually located in each of said collimation square holes; and a detector 3 coupled to said pixilated scintillators and operable to detect radiation emanating from an object and interacting with said scintillators after passing through said collimator device [0031 -0032].

Soluri fails to expressly disclose the method and/or the specifics of producing the collimator, for example, each of said sheets having evenly spaced slots into which other

sheets are inserted. Hase shows that a collimator having plates with a number of through holes formed side by side, each hole for guiding and inserting a plurality of plates is known (Figures 1, 2, 6, 11 and 14). Hase further teaches that the method of making such a collimator improves sensitivity, resolution and manufacturing yields (Col. 1, Lines 45 -52). In view of the utility in containing a collimator with such characteristics, it would have been obvious to one of ordinary skill in the art at the time the invention was made to specify that the collimator disclosed in Soluri be made such as that taught by Hase.

Additionally, Soluri discloses coating the scintillation crystals with an optical reflecting material [0038], but fails to teach said optical reflective material coating at least a portion of the surfaces of said sheets forming said grid of said collimation square holes. Notice, collimators comprising a coating of an optical reflective material is well known and conventionally used in the art. For instance, one of ordinary skill in the art may look to Nishiki, who shows it is known to have a collimator comprising plates where said plates are coated on both sides with a highly efficient reflector to reflect light beams generated from the scintillating element (Col. 3, Lines 55 – 58). Therefore, one of ordinary skill in the art would have recognized at the time the invention was made that the capabilities or the function of the combination would be predictable. Thus, the selection of an optical reflective material coating a scintillator crystal or coating a collimator represents an obvious choice within ordinary skill of the art, i.e., a choice between known viable alternatives (see KSR, 82 USPQ2d at 1395-66). Therefore, a

collimator comprising a coating of an optical reflective material would have been recognized.

With regards to claims 2, 11 and 20, Soluri modified discloses a collimator comprising optically reflecting material (See rejection of claim 1), which maximizes light intensity of pixilated scintillators events.

With regards to claims 3, 12 and 21, Soluri discloses said scintillators are scintillation crystals [0034].

With regards to claims 4, 13 and 22, Soluri modified discloses pixilated scintillators comprising square-shaped configuration [0037] (figure 2).

With regards to claims 5, 14 and 23, Soluri modified discloses said plurality of sheets is formed of a material having a high density [0033].

With regards to claims 6, 15 and 24, Soluri modified discloses said high-density material is tungsten [0033].

With regards to claims 7, 16 and 25, Soluri modified discloses said high-density material is lead [0033].

Claims 8, 9, 17, 18, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over in Soluri, Hase and Nishiki in view of Melscher et al. (US Patent 5,961,714).

With regards to claims 8, 9, 17, 18, 26 and 27, Soluri modified discloses the use of an optical reflecting material (i.e., the disclosure of Nishiki), however Soluri modified does not disclose using exclusively TiO_2 or MgO as the reflecting material. It would have been obvious to include TiO_2 and MgO as the reflecting material, since it is

conventionally used in that environment and would make the reflectance more efficient in view of what is old and well known in the art. For instance, Melscher et al. shows it is known to use TiO_2 and MgO as a reflecting material. Thus, the selection of the reflective material represents an obvious choice within ordinary skill of the art, i.e., a choice between known viable alternatives (see KSR, 82 USPQ2d at 1396). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to specify that the collimator disclosed in Soluri be made comprising the reflecting materials of TiO_2 or MgO, such as that taught by Melscher.

(10) Response to Argument

In response to the arguments presented in the "The proposed Combination" section of the brief.

Applicant argues that the motivation for utilizing the collimator as taught by Hase is improper. The stated motivation provided by Hase was that Hase's method provides high resolution and improves manufacturing yield. Applicant states that said motivations are broad and general. Applicant further argues that the examiner reconstructed applicants' claims only upon hindsight. The examiner respectfully disagrees.

To start, a broad and general reason is a reason nonetheless. In this instance, applicant has already acknowledged that Soluri fabrication of the collimator is cumbersome in previous arguments. Thus, a need for a different technique for fabricating a collimator would be appreciated and known to one of ordinary skill in the art. The examiner looks to Hase to show a known and different method for fabricating a

collimator. Hase teaches that his method provides high resolution and improves manufacturing yield which yields a predicable result while providing a proper motivation.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this instance, Hase teaches that his method provides high resolution and improves manufacturing yield which yields a predicable result while providing a proper motivation.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Specifically, applicant argues that Hase fails to teach the placement of individual scintillating crystals. The examiner agrees. However, the examiner does not rely on Hase to teach the placement of the scintillating crystals. Soluri teaches the placement of individual crystals. The examiner points to Hase to solve the cumbersome process of fabricating the collimator of Soluri as acknowledged by applicant. Hase shows that a collimator having plates with a number of through holes formed side by side, each hole

for guiding and inserting a plurality of plates is known. Hase further teaches that the method of making such a collimator improves sensitivity, resolution and manufacturing yields. In considering the teachings of the combined references or the known knowledge, the examiner has found that each of the claimed elements is known with the scope and content of the prior art. Therefore, one of ordinary skill in the art would have recognized at the time the invention was made that the capabilities or the function of the combination were predictable. Thus, the fact that Hase fails to teach individual crystals is irrelevant, since Hase is used for teaching the configuration of the collimator not the placement of crystals.

Applicant continues to argue that the placement of individual crystals in Hase's device would be contrary to the teachings of Hase and change the principle of the operation. Again, the rejection modifies the teachings of Soluri to include the teachings of Hase not the other way around as implied by applicant. Soluri teaches that pixilated scintillators individually located in each of said collimation square holes are preferred in order to achieve a geometric alignment as to guide photos into specific area of individual element matrix. Soluri is only modified with Hase to include the teachings of manufacturing and /or constructing of the collimator.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

(12) Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Conferees:

/David P. Porta/

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